

Amendment and Response

Applicant: Rory A. Heim et al.

Serial No.: 09/851,765

Filed: May 9, 2001

Docket No.: 10006454-1

Title: METHOD AND APPARATUS FOR COMPENSATING FOR INK CONTAINER EXTRACTION CHARACTERISTICS

A" cont.
monochrome ink container has a larger portion within the reservoir 34 and therefore will have different backpressure characteristics as ink is extracted than the much smaller chambers within the reservoir 34 associated with each ink color in the tri-color ink container 12. For this reason, the lookup table associated with the monochrome ink container 12 will have different values from the lookup table associated with the tri-color ink container 12.

IN THE CLAIMS

Please amend claims 1, 3, 4, 6, 7, 9-17 and 19 as follows:

- Sub B
1. (Amended) An inkjet printing system configured for receiving a replaceable ink container, the replaceable ink container having ink extraction characteristics that vary with ink extraction, the inkjet printing system comprising:
- an ink extraction determining device for determining ink extracted from the replaceable ink container; and
 - a control device for selecting a print mode from a plurality of different print modes based on ink extraction characteristics of the replaceable ink container.
2. The inkjet printing system of claim 1, wherein the control device selects the print mode for selectively pausing printing to reduce an average ink usage rate.
3. (Amended) The inkjet printing system of claim 1 wherein each print mode of the plurality of different print modes has a different pause value associated therewith.
4. (Amended) The inkjet printing system of claim 1 wherein the plurality of different print modes includes a first printing mode with a first usage rate and a second printing mode with a second ink usage rate different from the first usage rate.
5. The inkjet printing system of claim 1 wherein the replaceable ink container has ink extraction characteristics that vary with the ink level within the replaceable ink container.
- A12

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Sub B. 6. (Amended) The inkjet printing system of claim 1 wherein the replaceable ink container has a gauge pressure characteristic based on ink usage which varies with ink level within the ink container.

7. (Amended) The inkjet printing system of claim 1 wherein ink extraction characteristics are stored on an electrical storage device associated with the replaceable ink container, wherein the electrical storage device defines the ink extraction determining device, and wherein the ink extraction characteristics are provided to the control device after installation of the replaceable ink container into the inkjet printing system.

8. The inkjet printing system of claim 7 wherein the information storage device is a semiconductor storage device.

A12 cont. 9. (Amended) An inkjet printing system having a printhead responsive to control signals for depositing ink on media and an ink delivery system for delivering ink to the printhead, the inkjet printing system comprising:

a monitoring and control device for monitoring ink delivered to the printhead by the ink delivery system, and

for adjusting print rate during a print operation based on ink deposited on media and ink delivered to the printhead.

10. (Amended) The inkjet printing system of claim 9 wherein the monitoring and control device adjusts print rate based on a rate of ink deposited on media and a rate of ink delivered to the printhead.

11. (Amended) The inkjet printing system of claim 9 wherein the monitoring and control device determines ink delivered to the printhead based on ink extraction characteristics of an ink container.

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Sub B1 Cont.
12. (Amended) The inkjet printing system of claim 11 wherein the monitoring and control device determines an amount of ink delivered to the printhead over a given time interval based on an extraction rate for an ink container that is determined based on ink remaining in the ink container.

13. (Amended) The inkjet printing system of claim 9 wherein the monitoring and control device adjusts print rate to prevent the print rate from exceeding a rate of ink delivered to the printhead by more than a threshold value.

A12 Cont.
14. (Amended) The inkjet printing system of claim 9 wherein the monitoring and control device adjusts print rate by selectively pausing printing to reduce an average print rate.

15. (Amended) The inkjet printing system of claim 9 wherein the monitoring and control device adjusts print rate by selectively controlling numbers of nozzles activated.

16. (Amended) A method for operating a printing system having a printhead and a supply of ink separate from the printhead, the method comprising:

determining ink flow from the printhead;

determining ink flow into the printhead; and

adjusting a print rate during a print operation if the ink flow from the printhead exceeds ink flow into the printhead by a threshold amount.

17. (Amended) The method claim 16 wherein the determining ink flow from the printhead is based on drop counting.

18. The method of claim 16 wherein the determining ink flow into the printhead is based on ink extraction characteristics of the ink container.

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19. (Amended) The method of claim 18 wherein the determining ink flow into the printhead is based on ink level within the ink container.

20. The method of claim 16 wherein the adjusting the print rate is selectively inserting a pause between successive print swaths to reduce an average print rate for successive print swaths.

21. The method of claim 16 wherein the adjusting the print rate is selectively limiting the number of nozzles activated on the printhead.
